I. *Part of a Letter from the Reverend Mr.* Waſſe, *Rector of* Aynho *in* Northamptonſhire, *to Dr.* Mead, *concerning the difference in the Height of a Human Body, between Morning and Night.*

I Have obſerv'd ſeveral Soldiers diſcharged for being a little under the Standard, and having experienced the difference of a Man's Height in the Morning and at Night, I mentioned it to an Officer, and thereby kept ſome Perſons from being turn'd out of the Service. Since that Time I have meaſured Sir *H. A*...., Mr. *C*....., and a great many ſedentary People, and Day-Labourers, of all Ages and Shapes, and find that Difference to be near an Inch. I try'd my ſelf, when ſitting, and found it in like manner; particularly, *Auguſt* 21. 1723. Weather warm, no Wind, at Eleven in the Morning I ſat down, and fixed an Iron Pin ſo as to touch it, and that but barely. After that, I fatigued my ſelf for half an Hour with a Garden-Roller, and the Conſequence was, that at 12 Ho. 30 Min. I could not reach the Nail ſitting, by about 5 Tenths of an Inch, or the Breadth of one of the Rods of *Hunt*'s Sliding-Rule. At 2 the ſame Day I wanted near ſix Tenths of an Inch. On the 21ſt, at 6 Ho. 30 Min. in the Morning, I touched the Nail fully; and after the above-mentioned Exerciſe for only a Quarter of an Hour, at 7 Ho. 14 Min. I fell ſhort almoſt as much as before. On the 27th, having ſat up late with ſome Friends, I was faint, and felt my ſelf heavy upon the Ground, and without any Spring, and at 9 that Morning I did not reach the Nail, though I had us'd no

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Excrciſe. I rid out, but could not reach it that Day. On the 28th I rid about four Miles; and whereas at 6 that Morning I reached the Nail, I had loſt 6 tenths of an Inch by 8. *September* 19th I came from *Oxford* a little tired, and next Morning at 8 I wanted half an Inch. If I Study cloſely, though I never ſtir from my Writing-Desk, yet in 5 or 6 Hours I loſe near an Inch. All the Difference I find between Labourers and ſedentary People is, that the former are longer in loſing their Morning Height, and ſink rather leſs in the whole than the latter. I cannot perceive, that when the Height is loſt, it can be regained by any Reſt that Day, or by the Uſe of the cold Bath.

I have not informed my ſelf ſo well about Horſes; my Mare comes Seven this Graſs, is ſtrong, ſhort back'd, and well legg'd. I meaſured her before and after riding 20 Miles, *April* 30th, and could not perceive the leaſt Difference in her Height.

The Alteration in the human Stature, I imagine, proceeds from the yielding of the Cartilages between the *Vertebræ*, to the Weight of the Body in an erect Poſture.

AYNHO, *May* 16, 1724.

This curious Obſervation has been confirmed by ſeveral Members of the Royal Society, and others, who have purpoſely tried the Experiment.